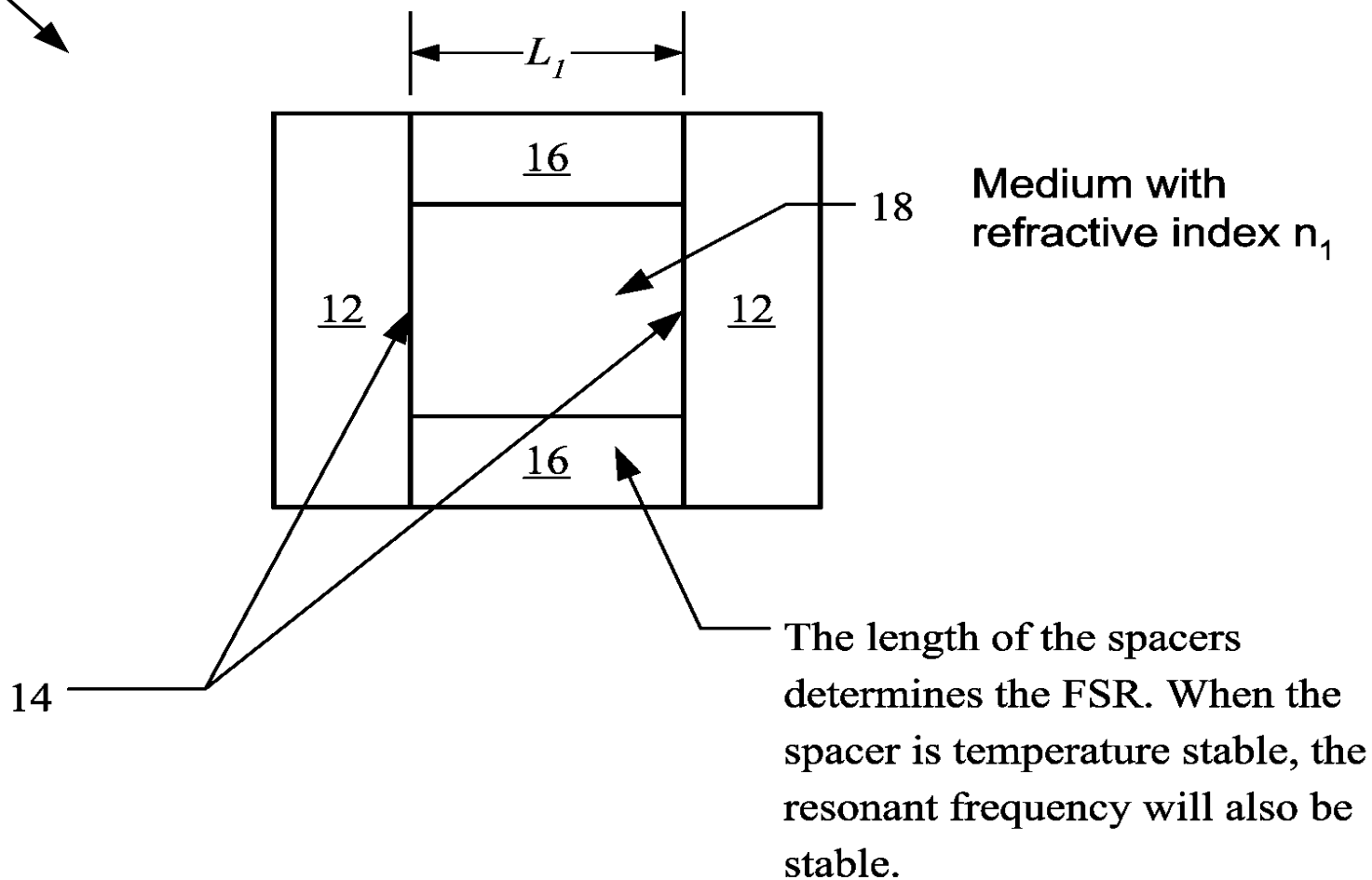
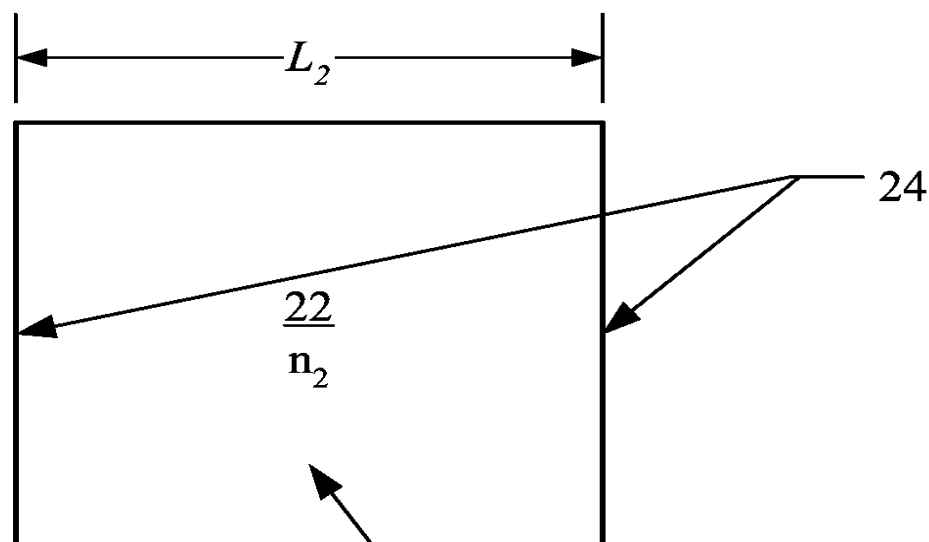


**FIG. 1 (background art)**

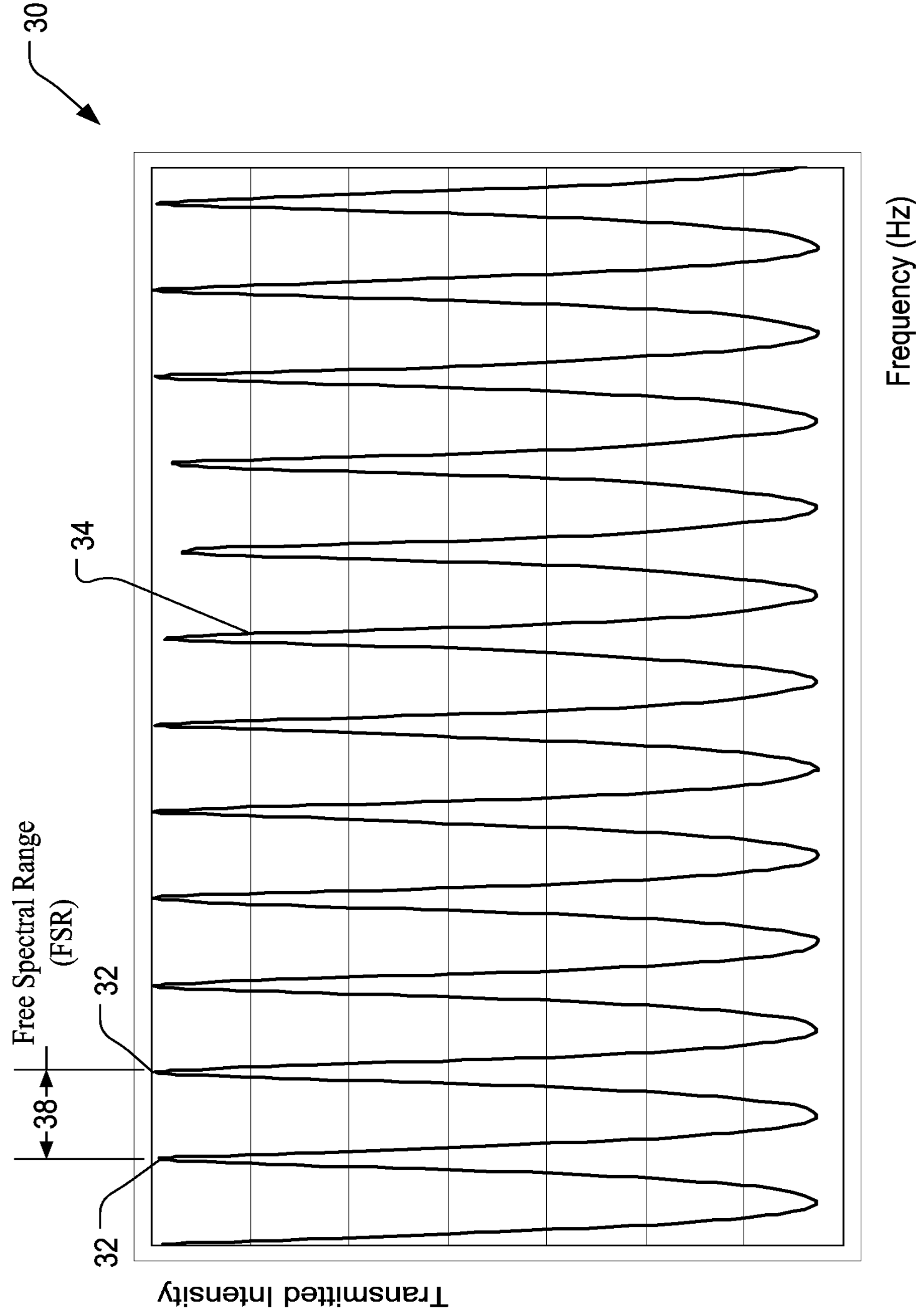
10



20

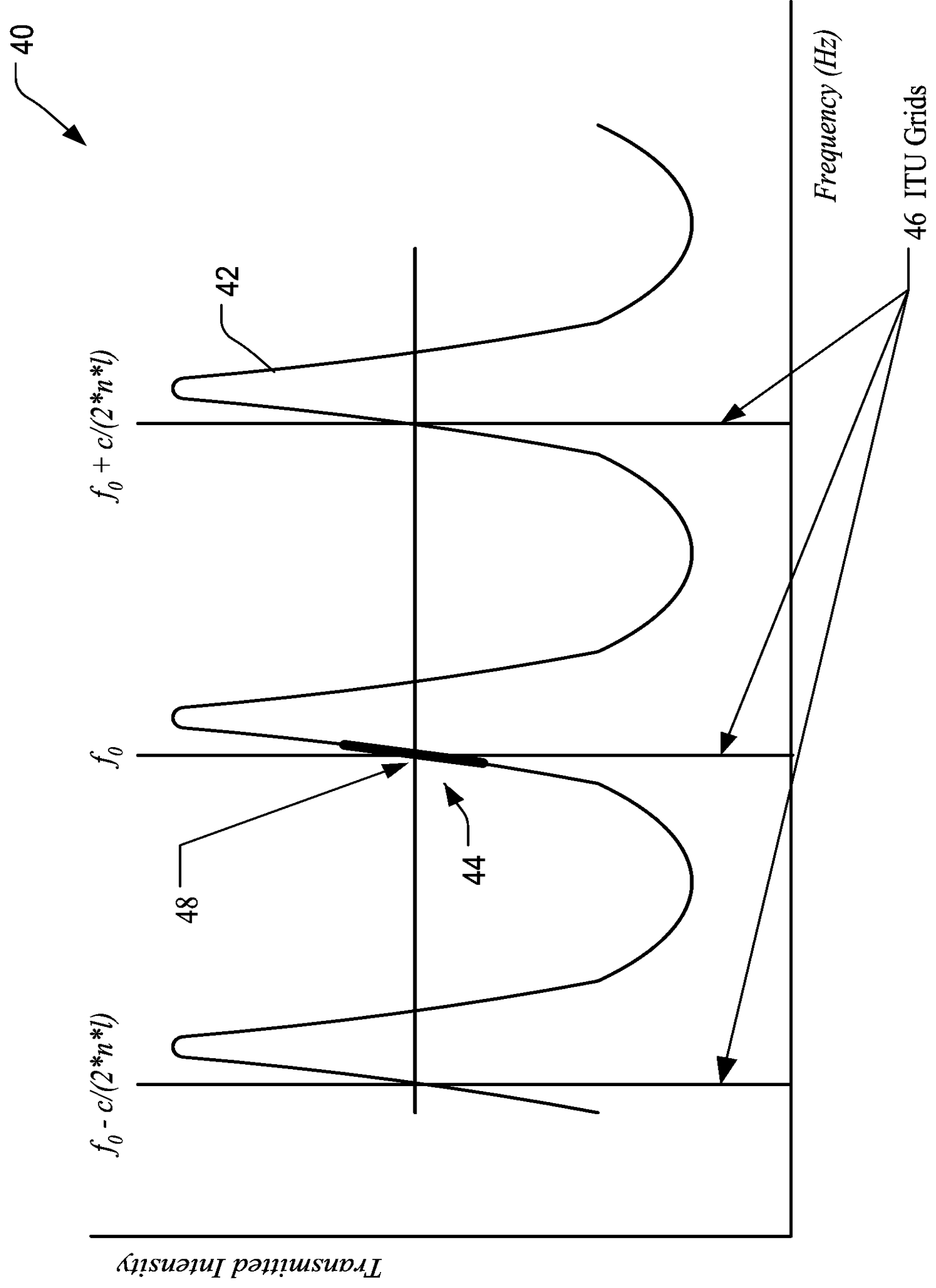


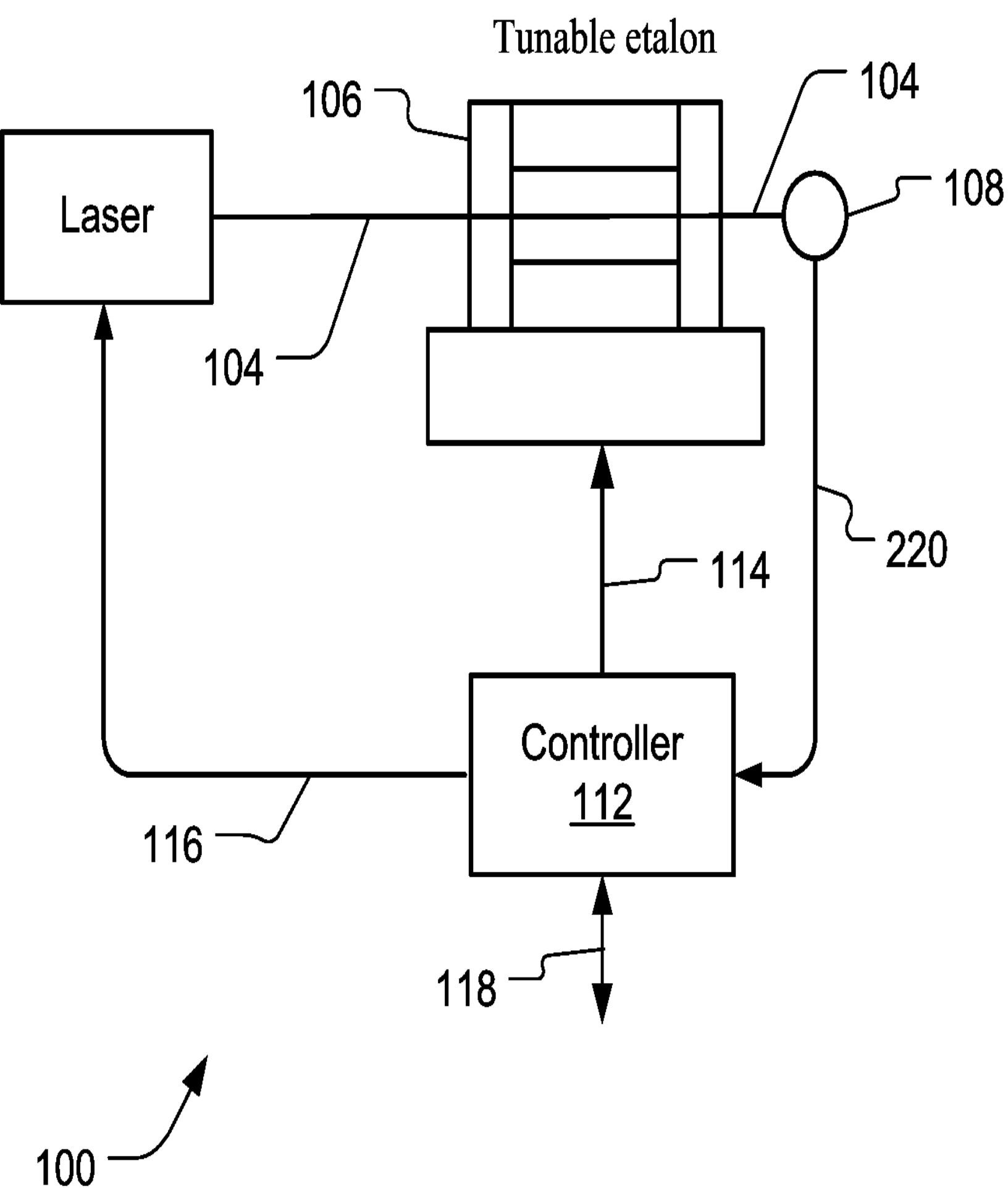
When the refractive index of the medium is the same as glass, the device becomes a solid Fabry-Perot etalon.



**FIG. 2 (background art)**

FIG. 3 (background art)

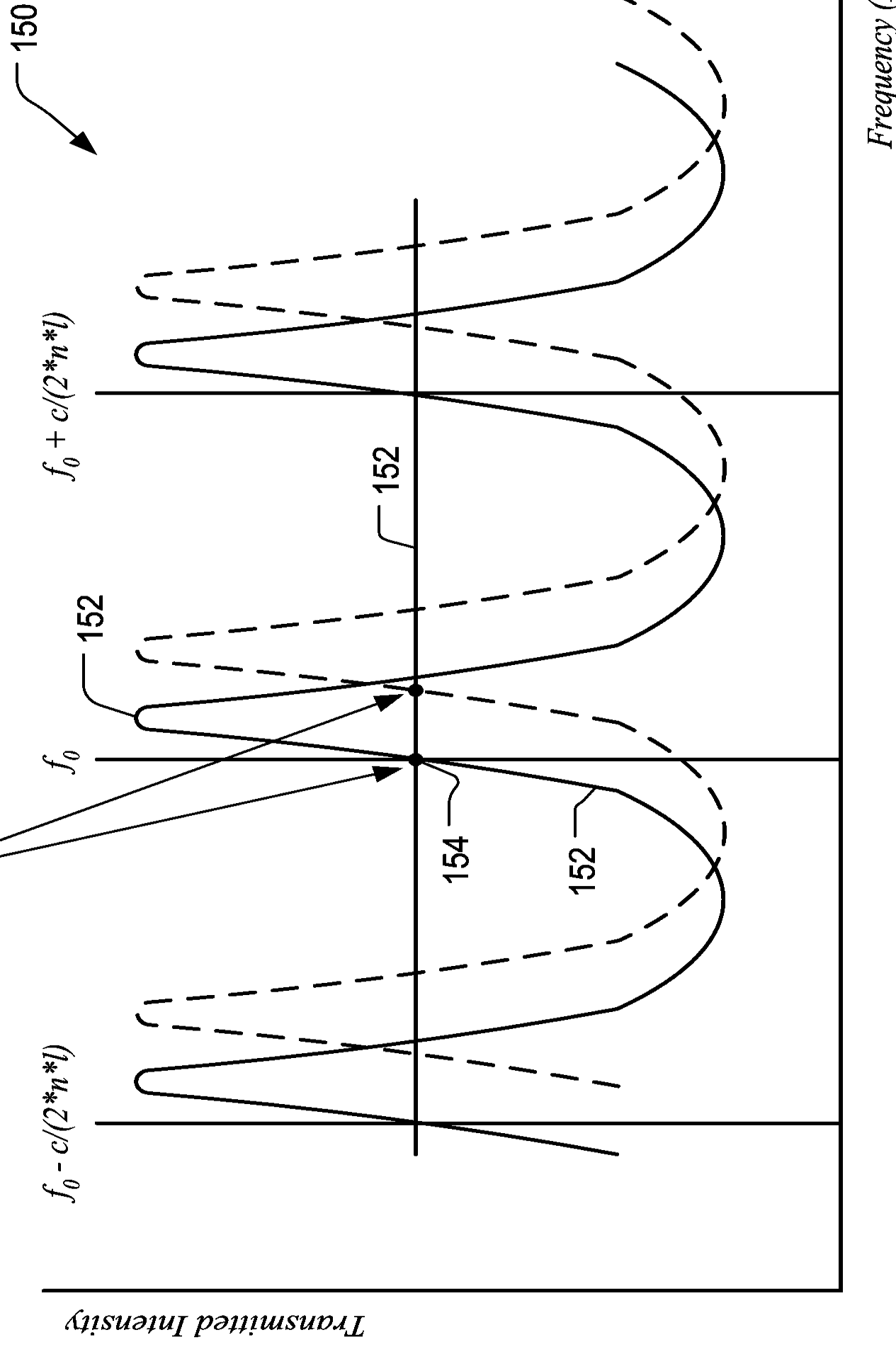


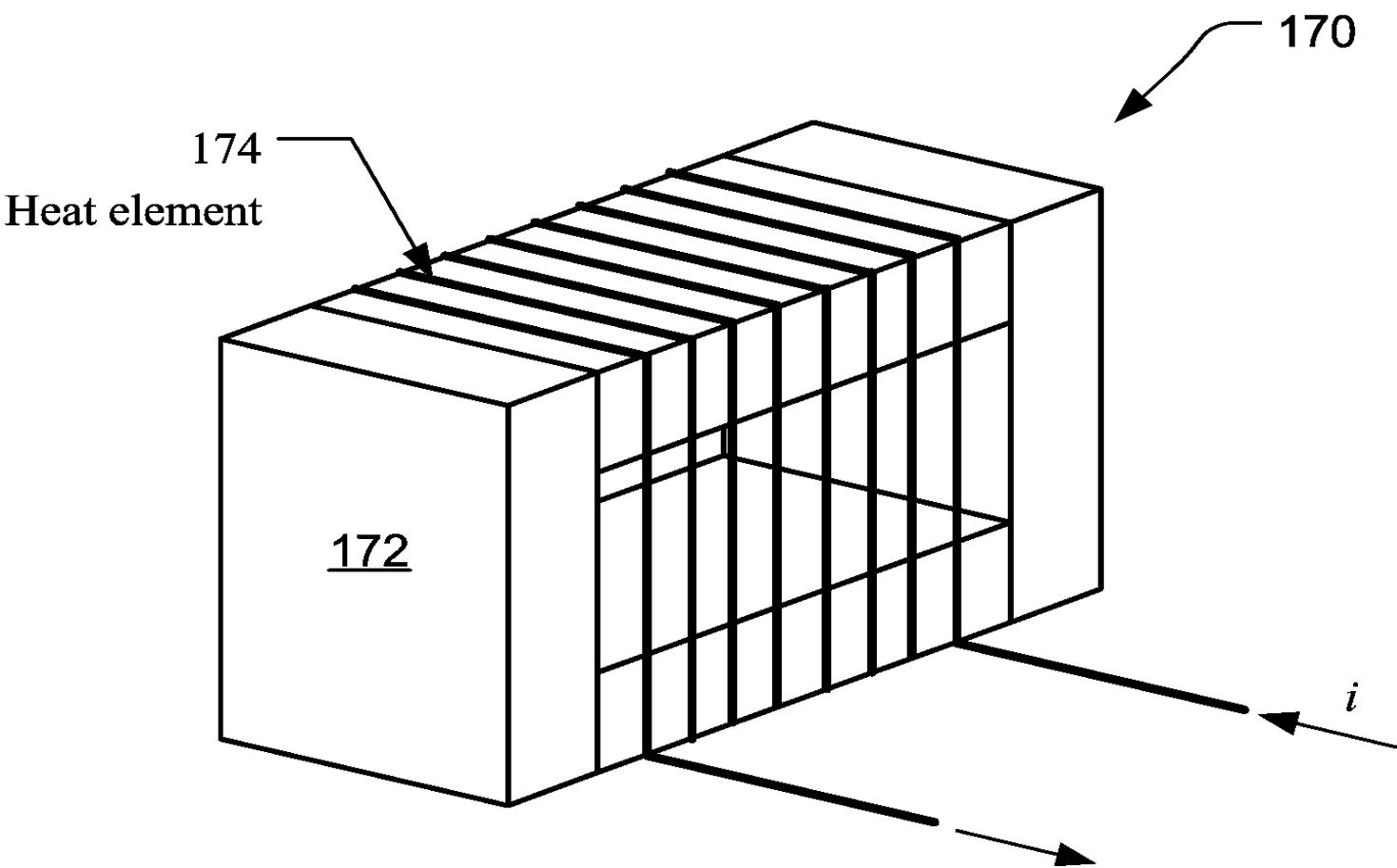


**FIG. 4**

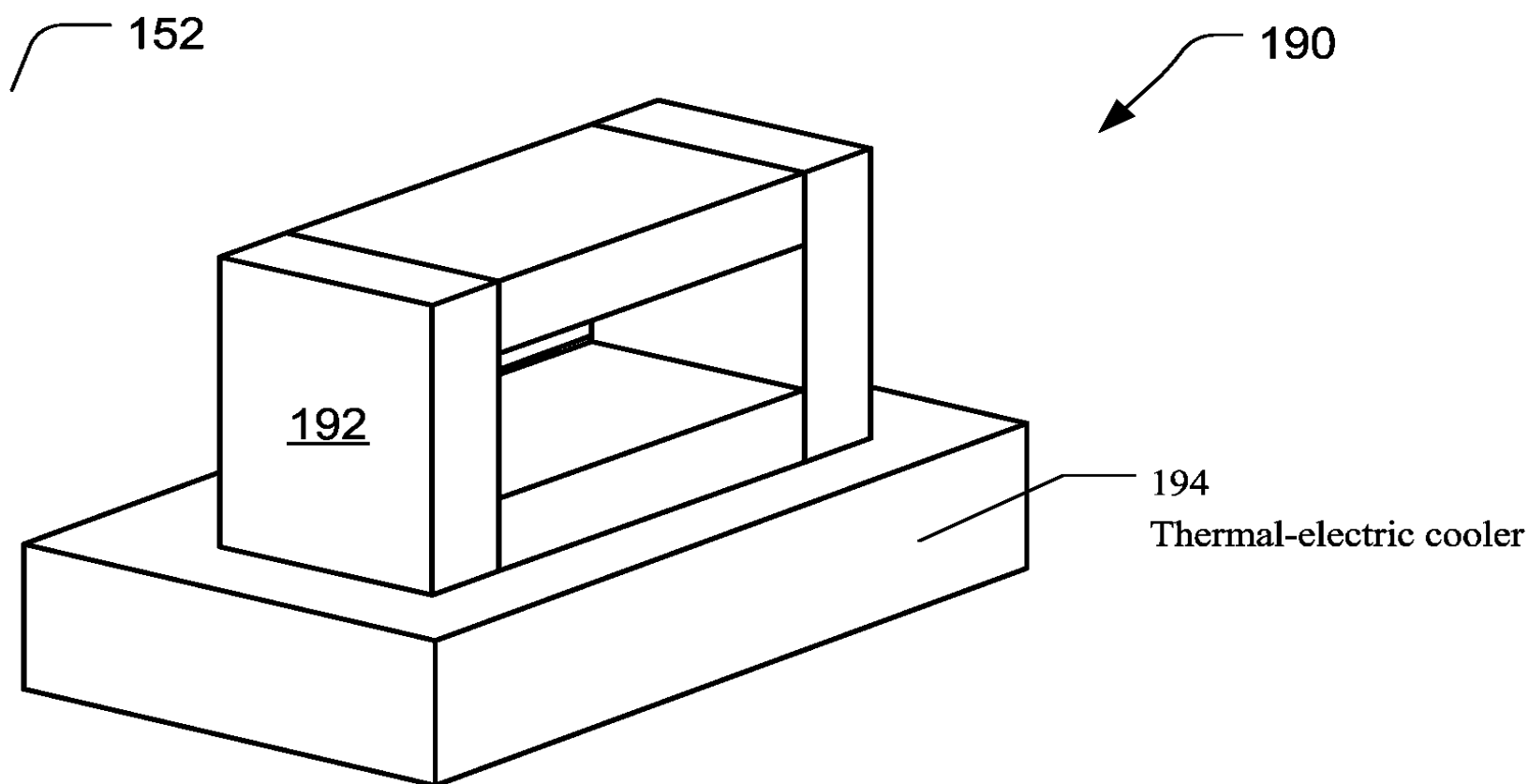
FIG. 5

The laser frequency lock point follows the movement of the peak-valley curve.





**FIG. 6a**



**FIG. 6b**

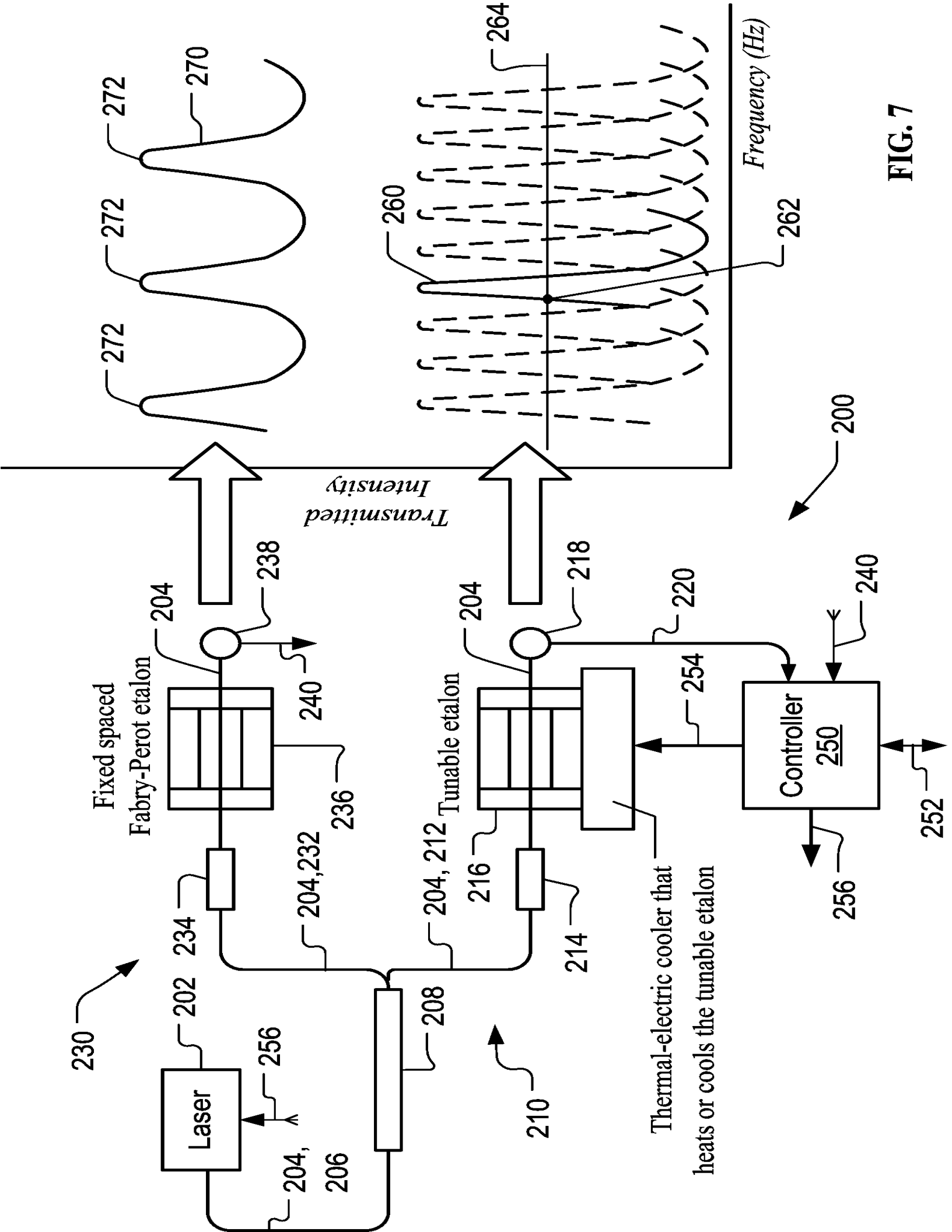
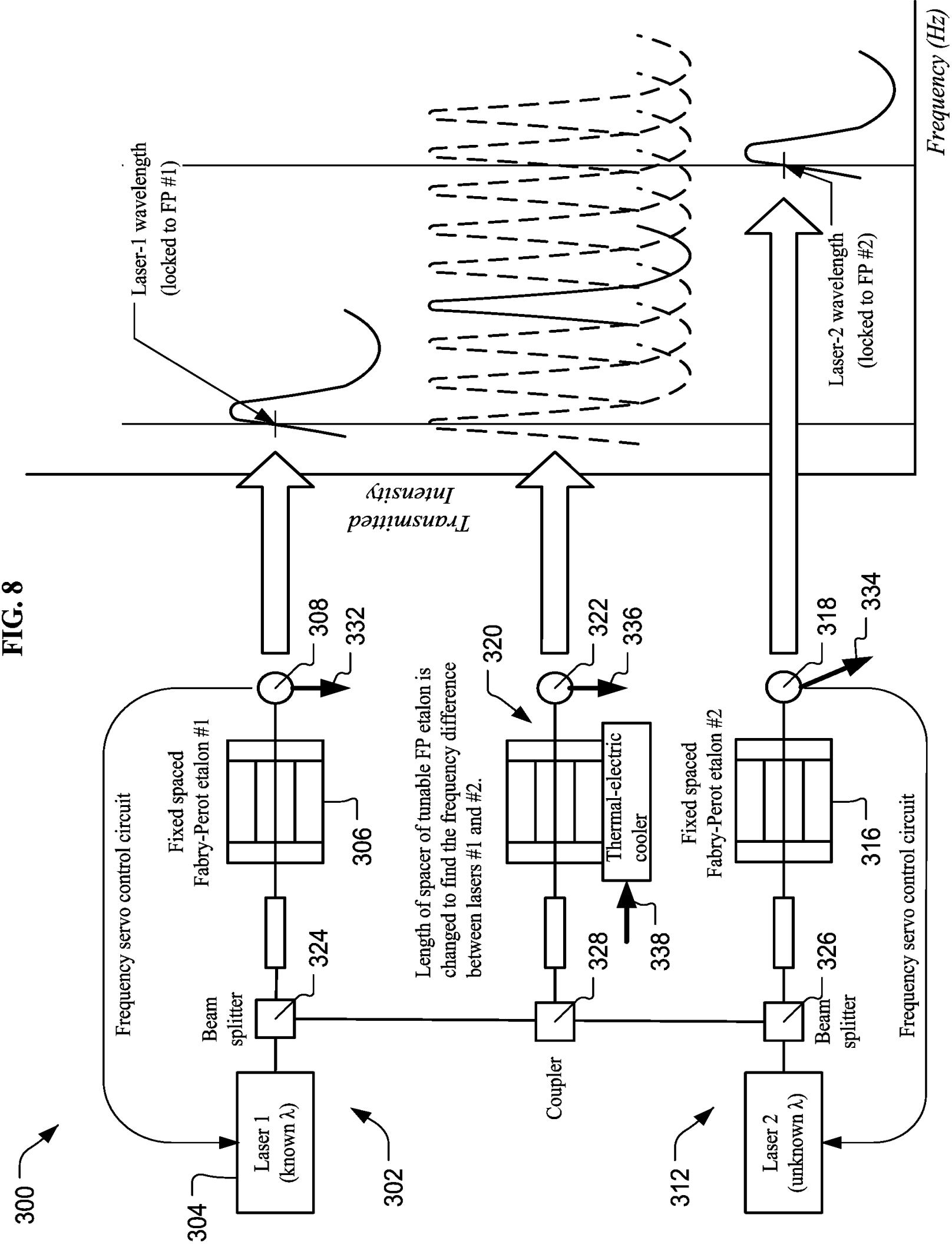


FIG. 7

FIG. 8





| <b>ITU Frequency<br/>(GHz)</b> | <b>Etalon Temperature<br/>(°C)</b> | <b>Etalon Spacer Length<br/>(mm)</b> |
|--------------------------------|------------------------------------|--------------------------------------|
| 196100                         | 14.0                               | 2.844                                |
| 196000                         | 14.8                               | 2.852                                |
| 195900                         | 15.6                               | 2.860                                |
| 195800                         | 16.4                               | 2.867                                |
| 195700                         | 17.2                               | 2.875                                |
| 195600                         | 18.0                               | 2.883                                |
| 195500                         | 18.8                               | 2.891                                |
| 195400                         | 19.6                               | 2.899                                |
| 195300                         | 20.4                               | 2.906                                |
| 195200                         | 21.2                               | 2.914                                |
| 195100                         | 22.0                               | 2.922                                |
| 195000                         | 22.8                               | 2.930                                |
| 194900                         | 23.6                               | 2.938                                |
| 194800                         | 24.4                               | 2.945                                |
| 194700                         | 25.2                               | 2.953                                |
| 194600                         | 26.0                               | 2.961                                |
| 194500                         | 26.8                               | 2.969                                |
| 194400                         | 27.6                               | 2.977                                |
| 194300                         | 27.6                               | 2.984                                |
| 194200                         | 29.2                               | 2.992                                |
| 194100                         | 30.0                               | 3.000                                |
| 194000                         | 30.8                               | 3.008                                |
| 193900                         | 31.6                               | 3.016                                |
| 193800                         | 32.4                               | 3.023                                |
| 193700                         | 33.2                               | 3.031                                |
| 193600                         | 34.0                               | 3.039                                |
| 193500                         | 34.8                               | 3.047                                |
| 193400                         | 35.6                               | 3.055                                |
| 193300                         | 36.4                               | 3.062                                |
| 193200                         | 37.2                               | 3.070                                |
| 193100                         | 38.0                               | 3.078                                |
| 193000                         | 38.8                               | 3.086                                |
| 192900                         | 39.6                               | 3.094                                |
| 192800                         | 40.4                               | 3.101                                |
| 192700                         | 41.2                               | 3.109                                |
| 192600                         | 42.0                               | 3.117                                |
| 192500                         | 42.8                               | 3.125                                |
| 192400                         | 43.6                               | 3.133                                |
| 192300                         | 44.4                               | 3.140                                |
| 192200                         | 45.2                               | 3.148                                |

**TBL. 1**